UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,404	05/08/2001	Gregory C. Schohn	12481-004001	1878

		EXAMINER
7590	07/02/2004	BLACKWELL, JAMES H

Nokia, Inc.
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ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 May 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-42</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-42</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>08 May 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4,5,6</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 11, 14, 18-25, and 29-42 are rejected under 35 U.S.C. 102(b) as being

anticipated by Ma et al. (hereinafter Ma, "A Framework for Adaptive Content Delivery in

Heterogeneous Network Environments", copyright 01/2000).

In regard to independent Claim 1 (and similarly Claims 36, 38, and 41-42), Ma

teaches adaptive content delivery that transforms web content and delivery schemes

according to a viewers' heterogeneous and changing conditions to enable universal

access (p. 1, last paragraph; compare with Claim 1 (and similarly Claims 36, 38, and

41-42), *"... receiving an electronic document represented by serial data that*

contains content of the document and defines an order in which respective

portions of the content are to be performed, analyzing the serial data of the

electronic document, and generating reorganization information for use in

delivering the portions of the content, the reorganization information enabling

performance in an order different from the order defined by the serial data").

In regard to dependent Claims 11 and 14, Ma teaches data prioritization in order

to distinguish the more important part of the data from the less important part so that

different quality of service levels can be provided when delivering the data through the

network. For example, we can allow less important data to be dropped under network

bandwidth constraints. Or, we can provide progressive delivery to send out the more

important data first (such as low-resolution images) and then deliver the less important

data to enhance the information later (such as the reconstruction of high-resolution

images). In this way, we can improve the user's browsing experience by efficiently

utilizing available network bandwidth. Data prioritization can be achieved within a single

media type by using special encoding schemes such as layered coding [9][13] and

multi-resolution compression for images [20]. It can also be done across multiple media

types by, for example, giving audio higher priority than video and text higher priority

than other types of media (Sec. 4.4, 1st paragraph; compare with Claim 11, *"... the*

reorganization information includes an identification of a relative importance of

the respective portions of the content" and Claim 14 *"... the reorganization*

information associates with each of the portions of the content a revised order for

presentation").

In regard to dependent Claim 18-20, Ma teaches that one of the purposes of

adapting the content involves the displays of other devices such as PDA's, cell phones,

and other Internet appliances that are different from the traditional desktop computer (p.

1, Sec. 1; compare with Claim 18, *"... performance of the portions of the content*

comprises presenting the portions on a display for viewing" and Claim 19, *"... the*

different order of performance enabled by the reorganization information is

adapted for a display that has a more restricted performance capability than does

the performance capability of the display for which the document was originally desired" and Claim 20, *"... the more restricted display is part of a mobile phone or personal digital assistant, and the display for which the document was originally designed comprises a desktop computer monitor").*

In regard to dependent Claim 21, Ma teaches Modality Transform that includes speech-to-text and text-to-speech transform (p. 3, Sec. 3.2; compare with Claim 21, *"... performance of the portions of the content comprises presenting the portions by speech synthesis").*

In regard to dependent Claims 22-25, Ma teaches Data Prioritization which has the goal of distinguishing the more important parts of the data from the less important part (p. 3, Sec. 3.4; compare with Claim 22, *"... analyzing includes identifying one of the portions as containing central content of the document"* and Claim 23, *"... generating includes inserting a link from near the beginning of the first portion of the content to the beginning of the central content portion"* and Claim 24, *"... generating includes moving the central content portion to near the beginning of the document"* and Claim 25, *"... generating includes altering the document so that the central content portion appears first when the document is performed").*

In regard to dependent Claims 29 and 30, Ma teaches that under Data Prioritization, one could give text higher priority than images, images before audio, and audio before video in considering a delivery pipeline (p. 5, top paragraph; compare with Claim 29, *"... analyzing includes identifying portions of the document that should*

be moved relative to other portions in generating the reorganization information"

and Claim 30, *"... the portions that should be moved comprise images or tables"*).

In regard to dependent Claims 31 and 32, Ma teaches Purpose Classification

which identifies images, logos, or advertisements. Purpose classification of a media

object can be done using content analysis techniques. It can also be achieved to some

extent by matching URL strings with a pre-established database or via heuristics for

associating means with certain text contained in the URLs (pp. 3-4, Sec. 3.5; compare

with Claim 31, *"... analyzing includes identifying regions according to functions*

and Claim 32, *"... the functions include navigation and content"*).

In regard to dependent Claim 33, Ma teaches that the Document Object is useful

data structure to represent the logical structure and contents of a Web page after it is

parsed in content adaptation systems. This defines the logical structure and contents of

the Web page that is to be adapted. The XML Document Object Model (DOM) [16]

technology can be used to represent the represent the hierarchical structure of a Web

page, with node elements representing entities such as text, images, audio, and video.

By using a Document Object Model to represent Web page structure, we can to perform

a number of document-level adaptations to the Web page. This complements the

component level adaptations that we implement, such as image scaling and video

modality transform. By analyzing the contents of the Web page as a whole, we can

optimize the adaptation process by identifying redundant information that can be

removed from the Web page without overly compromising the informational integrity of

the Web page. This page-level adaptation can be considered to be a "re-authoring" of

the content [4] (Sec. 5, right column, paragraphs 1 and 2; compare with Claim 33, *"...*

the analyzing includes converting the document to a tree format").

In regard to dependent Claim 34, Ma teaches blocking advertisement images by

matching URL strings with a list of keywords like "ad", "banner", "advertisement",

"promotion", or a list of known advertising web hosts (p. 4, top paragraph; compare with

Claim 34, *"... the analyzing includes blocking major regions of the document"*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 15-17, 35-37, and 39-40 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ma.

In regard to dependent Claims 15 and 16, Ma does not teach *the reorganization*

information includes a hyperlink to be displayed near the beginning of the document, the

hyperlink pointing to a portion of the content that appears later in the original order or

the hyperlink is included only if the location of the hyperlink in the document is

separated by at least a predetermined distance from the location to which it points.

However, it would have been obvious to one of ordinary skill in the art of web page

construction at the time of invention because this is one of many techniques used to

assist the user with web page navigation (also known as a targeted link). The benefit of

such a link would have been to take one to a specific location within a hypertext

document (e.g., to find a section of the document that is off the screen).

In regard to dependent Claim 17, Ma does not teach the *reorganization*

information causes an automatic redirection from the first portion of the content to a

later portion of the content when the document is opened for performance. However, it

would have been obvious to one of ordinary skill in the art of web design at the time of

invention to have used a HTML META command of the type <meta http-equiv="refresh"

content="0; URL=http://<a relative link would go here">. The benefit would have been

to redirect the user from one location on the web page to a different location on the

same or a different web page, making it easier to find the correct information.

In regard to dependent Claim 35, Ma does not specifically teach *the analyzing*

includes counting characters of text. However, it would have been obvious to one of

ordinary skill in the art at the time of invention to count characters of text providing the

benefit of having determined the character lengths of portions of text in the document in

order to compute what text will fit on a given display.

In regard to dependent Claim 37, Ma does not specifically teach *also including*

receiving other requests for portions of the content of the document different portions,

and in response to the requests, returning other portions of the content using the

reorganization information. However, Ma does teach that the preferred architecture is

either server-based or proxy-based (pp. 5-6, Secs. 6.1-6.2). The server-based

architecture suggests that many requests for different portions of the content would be

made simultaneously. Therefore, it would have been obvious to one of ordinary skill in

the art at the time of invention to have assumed a multi-threaded server device for carrying out the claimed receiving of other requests, providing the benefit of allowing multiple users with multiple different devices access to content.

In regard to dependent Claims 39 and 40, Ma teaches that a core data structure in the adaptive content system is the Document Object. This defines the logical structure and contents of the web page that is to be adapted. The XML DOM [17] technology is used to represent our Document data structure. We use the DOM to represent the hierarchical structure of a web page, with node elements representing entities such as text, images, audio, and video (pp. 7-8, Sec. 7.2). The DOM is used throughout the reorganization as the primary data structure for containing both the original document and the reorganized version. Compare with Claim 39, *"... also including the content, the data being expressed as a modified version of an original data structure that expressed the document"* and Claim 40, *"... the modified version includes annotations"*).

Claims 2-5, 7, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma in view of Moriya (U.S. Patent No. 6,161,140).

In regard to dependent Claims 2-4, 7, and 9, Ma fails to teach *the serial data representing the electronic document is expressed in a markup language* and Claim 3, *the markup language comprises a hypertext markup language* and Claim 4, *the serial data representing the electronic document is expressed in an electronic mail format* and Claim 7, *the hypertext markup language comprises HTML* and Claim 9, *the content of*

the document includes at least one of the following: text, images, tables, frames, and headings. However, Moriya teaches that the data storage section (231) stores various documents for supplying to the data terminal (1). Such documents may include HTML documents, e-mail messages and other documents with respect to characters, graphics or sounds (Col. 3, lines 58-62). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Ma and Moriya providing the benefit of storage of multiple markup language containing documents for transfer to various devices.

In regard to dependent Claim 5, Neither Ma nor Moriya specifically teach *the electronic mail format includes a header and a main body.* However, it would have been obvious to one of ordinary skill in the art at the time of invention to assume that this is the case as it is commonly known that electronic mail formats contain structures such as an email address, a subject, and a re: or title line (in combination or alone, comprising a header) and the content of the email message (even if it is left blank). The benefit would have been to have a standardized interface for electronic mail.

In regard to dependent Claim 10, Ma fails to specifically teach *the order in which the respective portions of the content are to be performed includes a two-dimensional layout.* However, Moriya includes a PC as one of the devices and each of the devices has a display, the PC having an output resolution (VGA) compatible with a two-dimensional layout (Fig. 17). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Ma and Moriya providing the benefit of displaying a larger percentage of content to a PC screen.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ma in

view of Moriya and in further view of Hearst (M. Hearst, "TextTiling: Segmenting Text

into Multi-paragraph Subtopic Passages", copyright 1997, ACL).

In regard to dependent Claim 6, Neither Ma or Moriya teach *the analyzing*

includes determining the start of the main body. However, Hearst teaches the

technique of TextTiling. TextTiling is a technique for subdividing texts into multi-

paragraph units that represent passages, or subtopics. The discourse cues for

identifying major subtopic shifts are patterns of lexical co-occurrence and distribution.

The algorithm is fully implemented and is shown to produce segmentation that

corresponds well to human judgments of the subtopic boundaries of 12 texts. Multi-

paragraph subtopic segmentation should be useful for many text analysis tasks,

including information retrieval and summarization (see Abstract). Implied in the

teaching of Hearst is a notion of identifying portions of text in a document, including a

main block of text, and more particularly where it starts. Compare with Claim 6, *"... the*

analyzing includes determining the start of the main body"). It would have been

obvious to one of ordinary skill in the art at the time of invention to combine the

teachings of Ma, Moriya, and Hearst providing the benefit of subdividing multi-

paragraphed blocks of text.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ma in view of Moriya and in further view of Weiss et al. (hereinafter Weiss, U.S. Patent No. 6,738,951).

In regard to dependent Claim 8, Neither Ma or Moriya specifically teach *the markup language comprises PDF, postscript, SGML, PowerPoint, rich text, or unformatted* text. However, Weiss teaches that a transcoder proxy includes a rule set including rules for translating electronic documents from any one of a set of first digital formats (e.g., a text-based markup language such as HTML, extensible markup language/XML, POSTSCRIPT, or portable document format/PDF) to any one of various Braille formats (e.g., English Braille, European Braille, Japanese Braille, and/or grades such as grade 1, grade 2, etc.)(see Abstract). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Ma, Moriya, and Weiss providing the benefit of having parsed and identified tagged documents for translation (reorganization).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ma in view of Hearst.

In regard to dependent Claim 12, Ma fails to teach *the reorganization information includes an identification of a main block of text*. However, Hearst teaches the technique of TextTiling. TextTiling is a technique for subdividing texts into multi-paragraph units that represent passages, or subtopics. The discourse cues for identifying major subtopic shifts are patterns of lexical co-occurrence and distribution.

The algorithm is fully implemented and is shown to produce segmentation that corresponds well to human judgments of the subtopic boundaries of 12 texts. Multi-paragraph subtopic segmentation should be useful for many text analysis tasks, including information retrieval and summarization (see Abstract). Implied in the teaching of Hearst is a notion of identifying portions of text in a document, including a main block of text. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Ma and Hearst providing the benefit of identifying the start of the most relevant portion of a document.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ma in view of Hearst and in further view of Lucas et al. (hereinafter Lucas, U.S. Patent No. 6,012,074).

In regard to dependent Claim 13, Neither Ma nor Hearst teach *the analyzing includes finding an annotation inserted in the electronic document as a marker of the location of the main block of text.* However, Lucas teaches a document management apparatus provides a user to define delimiters in order to specify portions of documents or attributes of documents to be retrieved from a document repository. The repository is searched for the defined delimiters and the portions of the documents or the attributes of documents are retrieved and put into a cache memory. The user-defined delimiters may be multi-character delimiters. The cache memory and the document repository may be connected over a network (see Abstract). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Ma, Hearst,

and Lucas providing the benefit of designating various parts of a document, including a main block of text.

Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma in view of Kanevsky (U.S. Patent No. 6,300,947).

In regard to dependent Claims 26-28, Ma fails to teach *analyzing includes identifying portions of the document that should not be separated in generating the reorganization information* or *the portions that should not be separated include at least one of the following pairs: heading and text, image and caption, or paragraph and related paragraph* or *analyzing includes identifying portions of the document that should not be moved relative to other portions of the document.* However, Kanevsky teaches that another criteria for making priority decisions in order to determine what and how to display web objects is the dependencies associated with these objects. For instance, assume that an object O1 is dependent on an object O2, if one of the following conditions are fulfilled: (1) every item (or most of the items) in O2 can be accessed from O1, meaning that if object O1 is activated (e.g., by clicking a mouse on O1) then, among other things, objects that are accessible from O2 are displayed; (2) items that are accessed from O1 contain most of the information that is described in items that are accessed from O2; and (3) items that are accessed from O1 refer in some way to information that is contained in items that are accessed from O2, for example, items in O1 are titles or abstracts of articles in O2. Other criteria of dependencies, for example, indicated in cookies, can be chosen by users (Col. 11, lines 64-67; Col. 12, lines 1-12).

In addition, Kanevsky teaches that in the block 901, objects that contain or point to information with the same or similar topics are combined into one set. An icon or button is created on an adapted web page that is linked to the combined data. A new name is chosen to characterize the combined data. This name is written (or expressed graphically via some symbol) on an icon or a button. For example, in FIG. 13, a typical part of a Yahoo entry panel to news is shown (block 1501). In block 1501, a first word on each line defines a topic of subsequent links (underlined words). For example, the word BUSINESS in the first line defines the content of links Headlines, Summaries, etc.; the word TECHNOLOGY in the second line defines the content of subsequent links in this line, and so on (Col. 14, lines 15-28). Kanevsky also teaches that he semantic interpreter module 905 separates objects on web pages that refer to different topics and combines (unifies) objects that refer to the same or similar subjects. These semantic operations are based either on instructions of web designers or may be performed automatically. The overall module 905 provides semantic interpretations of web objects that are needed for block 901. Semantic interpretations in block 901, for example, may define what objects are semantically close (i.e., have similar topics), what part of a link definition is relevant to a topic, etc (Col. 14, lines 58-67). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Ma and Kanevsky providing the benefit of fitting the content of a web page into a variety of display types and sizes.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H Blackwell whose telephone number is 703-305-0940. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 703-305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James H. Blackwell
06/25/04

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